



NEWS

U. S. DEPARTMENT OF COMMERCE • Environmental Science Services Administration

VOLUME 1 NUMBER 11

OCTOBER 26, 1965

AIMS OF THE ENVIRONMENTAL DATA SERVICE (EDS)

BY DR. HELMUT E. LANDSBERG, DIRECTOR

There is hardly a less glamorous word in the vocabulary than "data." But data are the hard facts of science. They are the touchstone of every theory. Often, when amassed and systematized, they lead to better understanding of nature. Invariably, they permit useful applications through statistical analysis.

The environmental sciences are voracious users of the data which are so prodigiously collected in the atmosphere, the oceans, and the solid earth. Many of these measurements serve an immediate operational use, such as making a weather forecast, calculating an epicentre, issuing a tsunami warning, making a navigational chart, or predicting an ionospheric disturbance apt to mar long-distance communications. But this is not the end of usefulness of the data that have been collected for these specific purposes, usually at considerable cost. In many instances, later analysis in the form of time series, frequency distributions, or large-scale charting reveals much information for use in long-range planning.

Environmental data are, therefore, saved and systematically exploited after operational use. During the past two centuries, many forms of international exchange of data in the various geophysical disciplines have developed. These exchanges have become more and more formalized and codified through agreements for the International Geophysical Year (IGY) and the International Years of the Quiet Sun (IQSY), as well as through standardized practices of the World Meteorological Organization (WMO).

Now we have within ESSA an organizational unit - the Environmental Data Service - which has as its first concern the collection of all data from various



A) 'THE ENVIRONMENTAL SCIENCES ARE VORACIOUS USERS OF THE DATA WHICH ARE SO PRODIGIOUSLY COLLECTED IN THE ATMOSPHERE, THE OCEANS AND THE SOLID EARTH.' EACH PIECE OF DATA MUST BE CATALOGUED AND STORED FOR EASY RECALL.

B) SATELLITE PHOTOGRAPHS ARE STORED ON MICROFILM AT A DATA CENTER FOR QUICK RETRIEVAL.

operational components for further analysis and interpretation. A principal objective of the Environmental Data Service is developmental work on storage, recall, and further utilization of these data. At present, climatology is probably the field within ESSA that best exemplifies the applications of past observations. The use of historical meteorological material in planning, for purposes of agriculture, aviation, construction, and industry, and in risk assessment for insurance will continue in EDS as formerly in the Weather Bureau. There are many similar uses of past data in the other geophysical fields. Presently these are taken care of by data centers in seismology, geomagnetism, geodesy, and various fields often collectively referred to as aeronomy. They will continue to serve these respective programs for their operational purposes. At the same time, these centers will be able to avail themselves of the management and operational experience gained in the handling of vast amounts of climatological data.

Through the Office of Environmental Data Systems, we hope to take advantage of this know-how in the field of storage and re-utilization of large masses of data for diverse objectives. Use of the facilities and expert knowledge of the National Weather Records Center for broader purposes, especially in archiving, can be expected. Coordination of various Data Center functions of ESSA for the benefit of the public and the scientific community will also be a task of the Office of Environmental Data Systems.

In the field of data handling, much remains to be learned. One major problem is the vast accumulations that have begun and will continue to cascade from satellites. The preservation, systematization, and recall of these data are yet to be mastered. Other targets for development are random access to a desired piece of information and rearrangement of data in a desired format. In climatology, where these problems have been faced for some time, other research on better understanding of climatic trends, on the dynamic climatology of anomalies, such as drought, and on new techniques of statistical analysis will be pursued vigorously. The Laboratory of Environmental Data Research, directed by Dr. Gerald L. Barger, will concentrate on these problems.

Data collection for its own sake is a temptation that must be discouraged. Rather, new applications and further expansion of old uses of the data will be a paramount aim. A most important arm in maintaining close liaison with users



12,000 PRIVATE CITIZENS, MOST WORKING WITHOUT PAY, KEEP DAILY WEATHER RECORDS WHICH ARE USED TO STUDY THE CLIMATE

and in developing new data uses will be the Field Service. The Regional and State Climatologists have a fine tradition in performing this important function. With the administrative help of the Weather Bureau's Regional Offices, they will continue their mission. Technical guidance for their effort will come from the Office of Field Services, directed by Harold B. Harshbarger. The Office of Field Services will also plan and monitor the collection of climatological data through Weather Bureau field offices and through our 12,000 cooperative

observers. In addition, the Field Service will establish and operate the climatic reference stations (Bench Marks). This task will gradually expand to cover cooperation in organizing Bench Marks for surveillance of water resources by other Government agencies. Further broadening of the functions of the Field Service can be envisioned. Just as weather stations have always gathered earthquake information for the Coast and Geodetic Survey, the posts of the climatological network may offer opportunities for still broader collection of information on the environment. Similarly, the strategic distribution of State Climatologists makes their offices ideal contact points for other services of ESSA.



MODERN, HIGH-SPEED DATA PROCESSING EQUIPMENT IS USED TO RECALL THE VAST AMOUNTS OF DATA WHICH MUST BE KEPT 'ON TAP.'

Information and interpretation of data for users is often handled most economically through publications. A number of traditional publications, such as the Weekly Weather and Crop Bulletin (jointly prepared with the Department of Agriculture) and the various Climatic Data issues, will continue as in the past. The Mariners Weather Log will remain our contact with the cooperative marine observers but will broaden its scope by including articles on oceanography and other geophysical disciplines of importance to maritime interests. Planning and staff supervision for these publications will come through the Office of Data Information. That office also will try to provide a "single point" user service for people requesting environmental data. The staff will know "where to get what" to handle such requests.

It is often said that scientists find it cheaper (or perhaps only more convenient) to repeat a series of observations rather than to search for the information. In the environmental sciences, however, events are frequently unique. Nature performs the experiments, and the scientist can only be an attentive observer. Many times, data collected a century ago gain new relevance in the light of recent developments. In fact, accumulated data generally rise in value as long as they remain accessible. To assure the accessibility of data for the environmental sciences will be the chief goal of the Environmental Data Service.

HELMUT E. LANDSBERG



Dr. Helmut E. Landsberg, the Acting Director of the Environmental Data Service, is a native of Frankfurt, Germany, where he earned his Ph.D degree at the University of Frankfurt in 1930. He became Research Assistant at the University upon completion of his studies (which included geophysics, meteorology, geology, mineralogy, physics, and mathematics) and later was appointed Supervisor of the Taunus Observatory. In 1934, Dr. Landsberg accepted a position at Pennsylvania State College, where he inaugurated a geophysical and meteorological laboratory and set up courses and research work in these fields. He moved to the University of Chicago in 1941 to teach meteorology and climatology.

Early in 1942, Dr. Landsberg became special consultant to the Army Air Corps, and a year later he began full-time work for them. After the war, he assisted on a project, sponsored partly by the Weather Bureau, on rainfall in Hawaii. For a brief period afterwards, he took over the section of industrial climatology in the Weather Bureau and then transferred to the Research and Development Board as Deputy Executive Director of the Committee on Geophysical Sciences, later becoming the Executive Director. He remained in the latter position until 1951, when he moved to the Air Force Cambridge Research Center as Director of the Geophysics Research Directorate.

Dr. Landsberg returned to the Weather Bureau in 1954 to take charge of the Bureau's climatological work, being named Director of the Office of Climatology in 1956.

Awarded the Department of Commerce Gold Medal for Exceptional Service in 1960, Dr. Landsberg is the author of two books and over 175 published research papers. He has been Editor of the *Advances in Geophysics* since 1952 and has served on numerous committees, including panels and groups under the National Science Foundation, the International Geophysical Year, and the World Meteorological Organization. Elected to fellowship in the American Academy of Arts and Sciences in 1958 and in the American Geophysical Union in 1962, he has held offices in both the American Geophysical Union and the American Meteorological Society.



ROBERT W. SCHLOEMER

Before his appointment as Acting Deputy Director, Climatology, of the Environmental Data Service, Robert W. Schloemer was Assistant Director of the Weather Bureau's Office of Climatology.

Mr. Schloemer has a B.S. degree in mathematics and physics from the University of Wisconsin and an M.A. degree in geography from Oberlin College, with additional extensive graduate work in geography and meteorology at Ohio State University, the University of Wisconsin, and Massachusetts Institute of Technology. He has served as instructor at the University of Wisconsin and Lecturer for George Washington University.

Mr. Schloemer received his initial Weather Bureau experience as an "Emergency Assistant" at the Chicago Airport Station during several months in 1942, leaving to accept a commission in the U.S. Army and advanced to Lieutenant Colonel. Principal service included assignment as Climatologist, European Theatre. After World War II, in 1946, he joined the Weather Bureau's Hydrologic Services Division in Washington, where he became Chief of the Meteorological Unit. Between 1951 and 1954, Mr. Schloemer served as Assistant Chief of the Hydrometeorological Section and as Chief of the Basin Estimates Unit.

In 1954, he transferred to the Climatological Services Division as Chief of the Domestic Area Section. He was appointed Assistant to the Director of Climatology in 1956 and became Assistant Director of Climatology in 1963.



HAROLD B. HARSHBARGER

Harold B. Harshbarger, Acting Director, Field Services, joined the Weather Bureau at Washington, D.C., as a meteorologist in late 1946. In 1947, he transferred to Hartford, Conn., as Principal Assistant. In January 1948 he moved to Albany, N.Y., where he was responsible for activating the Weather Records Processing Center and served as Official In Charge for more than two years.

With the consolidation of Weather Records Processing Centers in 1950, Mr. Harshbarger returned to Washington to work in the Climatological Services Division as Chief of the Records and Processing Section. In 1956 he was named Chief of the Climatic Field Services Branch and served as liaison official in Washington with the National Weather Records Center at Asheville, N.C. After the Weather Bureau reorganization in 1964, he became Manager of the Field and User Services Division.

Prior to entering the Bureau, Mr. Harshbarger served in the Army Air Corps during World War II, first as an instructor of meteorology and Assistant Director of Ground School and later as Station Weather Officer at several military installations. During this later period he was responsible for installations of the meteorological facility on three different military bases. He has a B.A. degree in mathematics from Gettysburg College and has done graduate work in meteorology at New York University.

GERALD L. BARGER



After spending the past year with the World Meteorological Organization in Geneva, Dr. Barger has returned to U.S. Government service as Acting Director of the Laboratory for Environmental Data Research.

Dr. Barger entered the Weather Bureau in 1948 as a meteorologist at Ames, Iowa. From 1952 until 1958, he was Area Climatologist for the majority of mid- and far-western states, with his duty station at Ames. In 1948, he moved to the National Weather Records Center, at Asheville, N.C., as Deputy Director and was appointed Director of the Center in 1961. He went on leave from the NWRC position in August 1964 to serve as Chief of the World Meteorological Organization's Planning Unit.

Dr. Barger has a B.A. degree in biology from Simpson College and M.S. and Ph.D degrees from Iowa State University, where he also served on the staff for 10 years, doing research on the interrelations among plants, soils and weather. Prior to entering the Weather Bureau, Dr. Barger worked for the Iowa Agricultural Conservation Committee and the Soil Conservation Service of the U.S. Department of Agriculture. He served as a pilot weather officer during World War II, completing his meteorological training at Chicago University in 1942.

The author of many scientific papers, Dr. Barger has done extensive research in the field of agricultural climatology. Under the auspices of the Department of Commerce, he attended the Harvard University Graduate School of Public Administration during 1960-1961, where he obtained the Master of Public Administration degree. Dr. Barger has served the American Meteorological Society as Associate Editor, Chairman for the Agricultural Meteorology Committee, and most recently as a member of the Council.

TRANSER ACTIONS

ESSA Circular 65-14, effective October 15, established five ESSA organizational components and officially transferred a number of former Weather Bureau and Coast and Geodetic Survey elements into the ESSA structure. Personnel actions, transferring individual employees, will be processed later.

Components established by the Circular are the Office of Public Information; the Financial Management Systems Staff (Office of Administration); the Institutes for Environmental Research; the Environmental Hazards Warning Information Center (Office of User Affairs); and the Planning and Coordination Group (National Environmental Satellite Center).

Among the transfer actions were: Chief Scientist (WB) to Office of Science and Engineering, ESSA; Office of Policy Planning (WB) and Program Planning Coordination Group and Operations Research Group (C&GS) to Office of Planning and Program Evaluation, ESSA; Internal Audit Staff (WB) and Internal Audit Group (C&GS) to Internal Audit Staff, ESSA.

Transferred to the Office of Administration (ESSA) were the Office of Administration (C&GS) and the Office of Administration and Technical Services (WB), excluding the C&GS Engineering Division, Library, Archives, Geographic Branch, and Scientific and Technical Publications Staff and the WB Engineering Division, Scientific Documentation Division, and Computation Division.

Within the Office of Administration, ESSA, the Administrative Operations Division (WB) and Administrative and Technical Services Division (C&GS) were transferred to Administrative Operations Division, ESSA; Budget and Finance Divisions (WB and C&GS) to Budget and Finance Division, ESSA; Management and Organization Divisions (WB and C&GS) to Management and Organization Division, ESSA; and Commissioned Personnel Group (C&GS) and Personnel Divisions (WB and C&GS) to Personnel Division, ESSA.

Other transfers effected by the Circular were: Office of International Affairs (WB) and International Activities Officer and International Technical Cooperation Group (C&GS) to the Office of International Affairs, ESSA; Resources Programming Group (C&GS) to Management Information Center, ESSA; Deputy Director for Service Programs, ONMS (WB) to Office of User Affairs, ESSA; and Office of Aviation Affairs (WB) to Office of Aviation Affairs, ESSA.

The Office of the Federal Coordinator for Meteorological Services and Supporting Research was transferred from the Department of Commerce to ESSA, and the Office of Radio Frequency Management from the National Bureau of Standards to ESSA.

The Circular transferred the Office of Climatology (WB) to the Environmental Data Service, ESSA, . The National Weather Records Center (WB) was moved to Office of Environmental Data Systems, ESSA; portions of the Field and User Services Division (WB) to Office of Field Services, ESSA; other portions of the Field and User Services Division (WB) to Office of Data Information, ESSA; Laboratory of Climatology (WB) to Laboratory for Environmental Data Research, ESSA.

Further changes made included the transfer of the Office of Meteorological Research (WB) to the Institute for Atmospheric Sciences, ESSA, and the Central Radio Propagation Laboratory (NBS) to the Institute for Telecommunication Sciences and Aeronomy, ESSA. The latter change included partial transfer of certain units (Administrative Services, Budget and Finance, Computer, Management and Organization, Personnel, Scientific Documentation, and Public Information) from NBS' Administrative Services Division to the Office of Administration and Support Services, Institute for Environmental Research, ESSA.

The National Weather Satellite Center (WB) was transferred to the National Environmental Satellite Center, ESSA. Within the Satellite Center, the former Operations Division was transferred to the Office of Operations; the TOS Systems Engineering Division to the Office of System Engineering; the Meteorological Satellite Laboratory to the Office of Research; and the Support Services Staff to the Support Services Group.

National Oceanic and Atmospheric Administration

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages

Faded or light ink

Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
July 23, 2010